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Their outer shape has generally by transformation become partially lost in the surrounding hydromuscovite. The Ti has probably been furnished by the two quartz strata, as I have observed, only a few feet distant, many other pieces of quartz impregnated with the same black mineral, while the enveloping strata were perfectly free from it, or had it only partly remaining as the more insoluble  $\text{FeS}_2$ .

OCTOBER 24, 1881.

*Pyrophyllite and Alunogen in Coal-mines.*—Mr. ELI S. REINHOLD made the following communication :

About two years ago the writer discovered in the coal slates of the North Mahanoy colliery, near Mahanoy City, Schuylkill County, an interesting mineral which, in its determination, defied the ordinary tests based on physical characters. A chemical analysis by Dr. F. A. Genth proved it to be an interesting variety of pyrophyllite. His report to the American Philosophical Society gives the results of the analysis, together with information as to occurrence, etc.

Attention is here called to that report for two reasons: First, for the purpose of making a correction; and, second, for a possible connection between pyrophyllite and the recently discovered alunogen.

When the writer furnished Dr. Genth with information regarding the pyrophyllite, he stated that it was found in but *one vein, of only one mine*. He has since found it at four different collieries, and coming from, at least, three different coal-veins.

*Alunogen.*—In a valley extending northeast from Mahanoy City, a distance of about a mile, are a number of collieries. A stream of water flows through it, receiving the mine-water from several of these collieries. During heavy rains the stream overflows its banks and covers a large area with the sulphur-water. The writer noticed, last spring, after the water had subsided, a white mineral coating the surface recently inundated. This mineral proves to be alunogen. In this efflorescent form it has been more abundant this summer than before.

As foreign mineralogists have noted the occurrence of this mineral in the coal-slates of Bohemia, Bavaria and England, and as the same mineral is common in our own State, as an efflorescence where iron-sulphide comes in contact with clay, its discovery here in the anthracite coal region may be regarded quite natural rather than surprising. However, there is a hint at a different origin of the alunogen found here from that ordinarily given. Instead of it being the result of the sulphur contained in the mine-water uniting with the alumina of the slate, the writer is inclined to think that the latter constituent is furnished by the

rapidly decomposing pyrophyllite, which contains fully 27 per cent. of alumina. This opinion is based on two facts:

1. Only since pyrophyllite has become abundant has this efflorescence been noticed.

2. Only at collieries where pyrophyllite is found, can traces be found of the alum deposit.

I propose to make some experiments that may throw further light on the subject; but facts, as far as observed, point to this origin of a mineral not heretofore credited to this locality. It adds one more to the extremely limited list of minerals found in the anthracite coal-field.

*New Locality for Mountain Cork.*—THEO. D. RAND announced a new locality for mountain cork, about one-third of a mile north-west of Radnor Station, P. R. R., Delaware Co., Pa., where it was found by him in the soil overlying the serpentine belt.

*A New Locality for Aquacreptite.*—MR. G. HOWARD PARKER announced a new locality for aquacreptite. He had found it as a seam or vein in partially decomposed micaceous gneiss on Lansdowne Avenue,  $1\frac{1}{2}$  miles west of Hestonville, Philadelphia.

*Note on Aquacreptite.*—Prof. LEWIS remarked that as bearing upon the genesis of aquacreptite, it was of interest to observe that at each of the three localities where that mineral had been discovered the rock enclosing it was different from that at either of the other localities. Aquacreptite was first found at Strode's Mill, Chester County, by Mr. Jefferis, as long ago as 1832. It was known by local mineralogists under various names until described by Prof. Shepard, in 1868, as a new mineral. At this, the original locality, it occurred in serpentine. The second locality, near Marble Hall, Montgomery County, was discovered by the speaker in 1872, and is mentioned in Dr. Genth's Report on the Mineralogy of Pennsylvania. It here occurs in a pocket in limestone. At the third locality, West Philadelphia, now reported by Mr. Parker, it occurs in gneiss.

From the existence of aquacreptite in these diverse rocks, it seems probable that its origin cannot be ascribed to any direct alteration, but that, as in clays, it is in part mechanical.

Aquacreptite is a variety of bole, differing from other varieties in the greater degree of decrepitation which it undergoes when placed in water. Some time ago the speaker had made some experiments to determine the cause of this remarkable decrepitation. He had found that it was a purely mechanical action due to capillary attraction. When the porous mineral is suddenly immersed in water or any other liquid, the liquid enters its pores so rapidly as to split it open. If, however, it is gradually moistened and the enclosed air is replaced slowly by liquid, no decrepitation takes place upon subsequent immersion. That no